SECTION 103 - SIDEWALKS

1. GENERAL

The work to be done under this item shall include the excavation, sub-grade treatment and construction of concrete sidewalks as indicated on the drawings and any other incidental thereto.

2. EXCAVATION AND EMBANKMENT

Excavation shall be made to the required alignment, grade and cross section as shown on the detail drawings or as directed by the Engineer. All excavation and embankment shall conform to Section 102, entitled "Excavation and Embankment."

3. SUBGRADE TREATMENT

Subgrade treatment shall conform to Section 102, entitled "Excavation and Embankment." Tree roots within four (4) inches of the sides or bottom of the sidewalk also shall be cut and removed.

4. FORMS

Sidewalk forms shall conform to Section 205, entitled "Concrete Pavement".

5. CONCRETE COMPOSITION

Concrete used for sidewalks shall conform to Section 202, entitled "Portland Cement Concrete".

6. PLACING CONCRETE

Before depositing concrete, the subgrade shall be thoroughly moistened. Concrete shall then be deposited between the forms in its full course and in one continuous operation. It shall then be thoroughly consolidated between the forms by means of vibrating screeds or internal vibrators, after which it shall be struck off and given an approved finish. All edges and expansion joints shall be edged with a tool.

Concrete may not be deposited on frozen or muddy subgrade.

7. CURING

The sidewalk shall be protected from premature drying for a period of at least 3 days by means of damp mats or burlap, or use of an approved curing compound.

The Contractor shall be responsible for the curing and protection of the sidewalk until the work has been accepted.

8. EXPANSION JOINTS

Expansion joints one-half (1/2) inch in thickness shall be placed at each side of each driveway; and at approximately equal distances, not to exceed 50 feet, between; also where new work adjoins old sidewalk, or other rigid structures of any kind.

Expansion joints in curb walks shall be placed to line with expansion joints in existing curb and gutter. There shall be an expansion joint between sidewalk and the back of existing curb and gutter.

Expansion material shall not be left projecting above the finished surface of the sidewalk.

All expansion joint material shall be Type "B" (non-extruding and resilient). This type of filler shall have relatively little extrusion and a moderate to high amount of recovery after release from compression. The joint filler shall conform to all requirements for Type III material of the Standard Specifications for "Preformed Expansion Joint Fillers for Concrete," A.A.S.H.O. Designation M153.

Expansion material shall be considered incidental to the contract and no separate payment will be made.

9. CLEANING AND GRADING

When the forms are removed from the sidewalk, the area between the sidewalk and curb and gutter shall be excavated or filled to provide a finished straight line grade between the sidewalk and the curb and gutter.

All forms, old lumber, broken concrete or other rubble resulting from the Contractor's operation shall then be removed from the site of the work.

10. THICKNESS AND SLOPE

All sidewalks shall be four (4) inches in thickness except through driveways where the thickness shall be increased to six (6) inches. The sidewalk sections shall be constructed true to line and grade as described by the Engineer. The sidewalk sections shall slope toward the top of the curb at the rate of one-quarter (1/4) inch per foot.

11. CONTRACTION JOINTS

Contraction joints shall be formed at intervals not to exceed five (5) feet. The contraction joints shall be formed by cutting entirely through the fresh concrete with a trowel. All contraction, construction, and expansion joints shall be rounded with an edging tool.

12. REINFORCEMENT IN SIDEWALKS

All sidewalk sections that are six (6) inches in thickness shall be reinforced with wire welded fabric. The wire fabric shall be No. 10 wire in a size six (6) by six (6) inch pattern weighing 21 pounds per hundred (100) square foot.

13. SEALING JOINTS

The joints shall be sealed with the type or types of joint sealing compound called for on the plans or in the proposal. The joints shall first be thoroughly cleaned of all loose scale, dirt, laitance or other foreign matter by the use of scrapers, or resawing if necessary, and flushed clean with water and air under pressure. Free water shall be removed from the joint with air jets before the joints are sealed. If the hot poured type is used, the faces of the concrete at the joint shall be thoroughly dry and the sealing operations shall not be performed until after the curing period is finished.

If the cold poured type is used, this operation may be performed at any time after the concrete has taken a hard set and the concrete surfaces at the joint may be moist.

All joints, expansion, ribbon or sawed, and all premature or natural cracks, if such occur, shall be filled from the bottom of the joint or crack to the surface of the pavement and all excess joint material removed at the time of final inspection.

14. HOT TYPE JOINT SEALING COMPOUND

This shall be a plastic material that, when heated, will completely fill the joints when poured from a suitable container or forced into the joint opening under low pressure.

This type of joint sealing shall comply with the requirements of the Standard Specification for "Concrete Joint Sealer, Hot Poured Elastic Type" AASHO Designation M173.

Any materials which are injured by heating shall not be used in the joints. Injury shall be determined by subjecting the materials to tests as prescribed by the Engineer. Injury may be considered to have occurred when materials have been heated beyond the maximum temperatures recommended by the manufacturer of the materials.

15. EQUIPMENT FOR HEATING HOT POURED JOINT COMPOUND

Hearing equipment shall consist of a heating unit that prevents a direct flame against the surface of the container holding the compound and that provides continuous mechanical agitation of the compound being heated. The compound melting unit shall be so constructed as to permit the material to be heated to a pouring consistency within one-half (1/2) hour without injury to the material. Also have an accurate readable temperature gauge. The capacity of the unit shall not be less than two hundred (200) pounds per hour.